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No. 1.—Vol. 1. NOVEMBER, 1904. 3d. Monthly.

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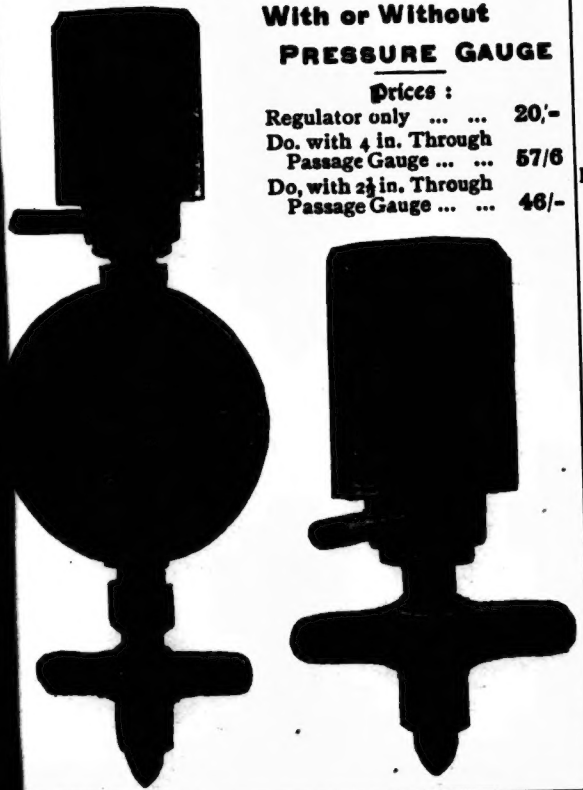

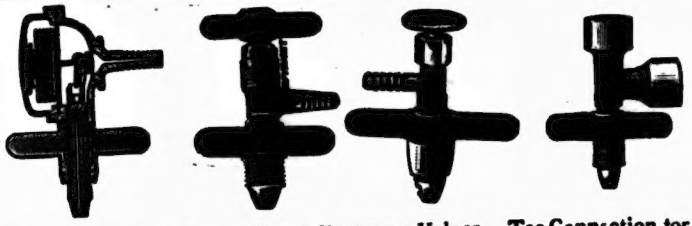

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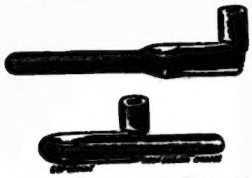

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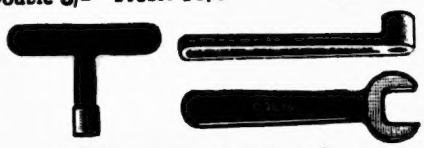

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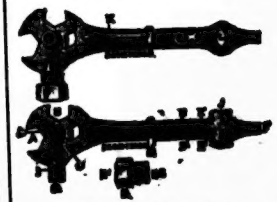

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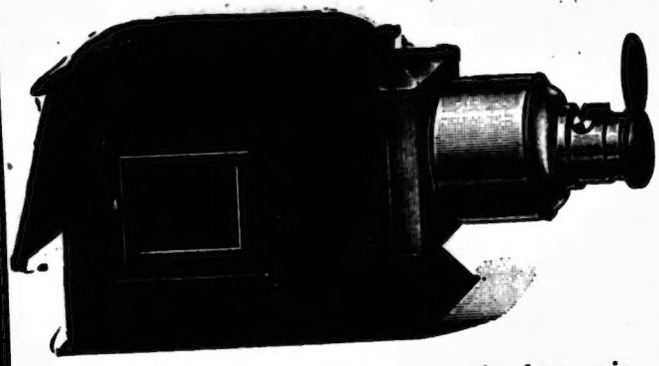

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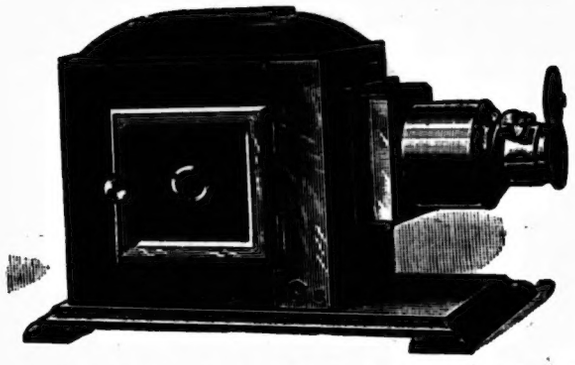

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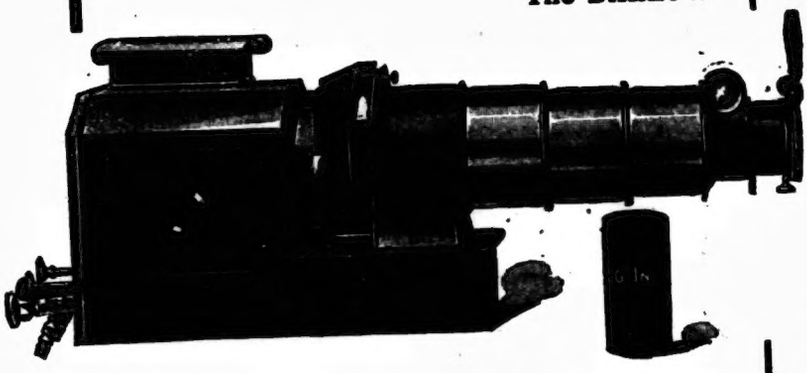

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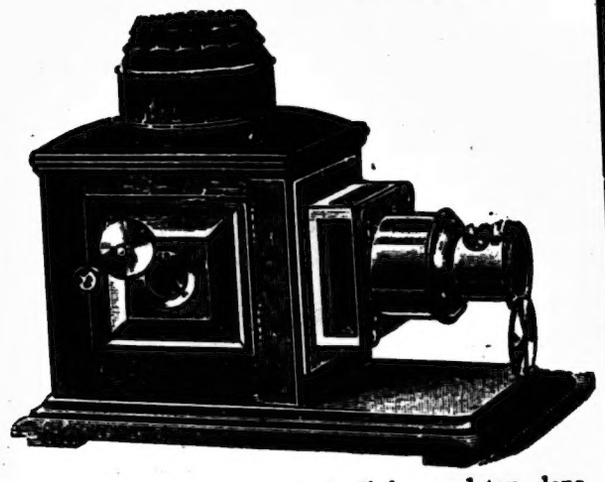

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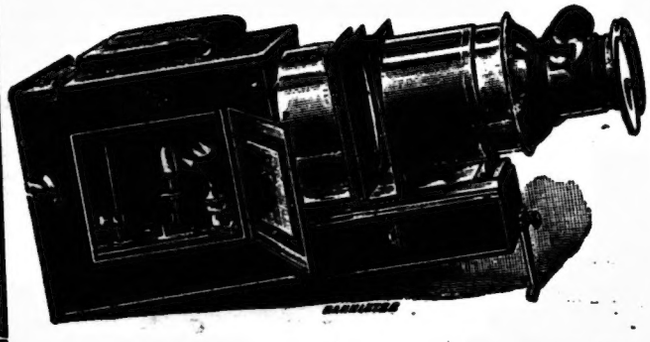

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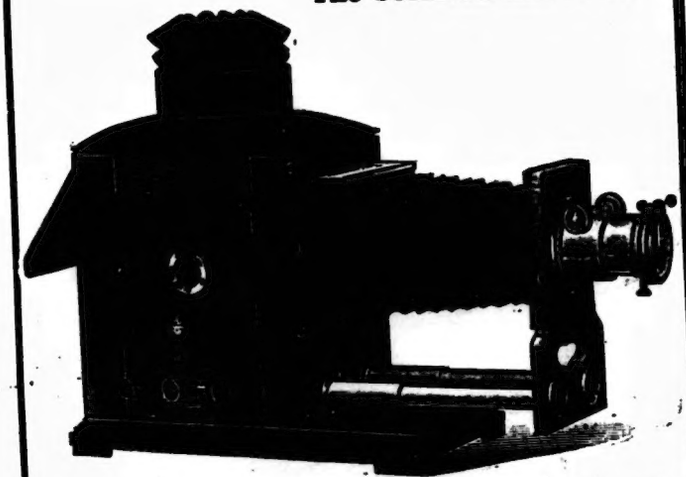

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GENTLEMEN,—In handing you our New and Revised Price List for the Lantern Season now commencing, it is apparant to us if we wish to gain and hold our proper place in the *Lime Cylinder Trade*, nothing should be left to chance, therefore we take this early opportunity for the *Tenth Year* in succession, to call your attention to the superiority of our manufacture and the unique position we hold in the Trade, as proved by the continued and ever increasing support we have received from the Optical Lantern and Cinematographic Trades generally.

As you are doubtless aware, since the inception of our business upwards of Ten years have elapsed, and during that time marked improvements year by year have been made in the High Pressure Jets, and every season brings forth something new and more powerful in that article, consequently the Lime Cylinder Manufacturers have to meet the demand for "Limes" that will resist these all too powerful instruments, and it devolves upon the makers to keep pace with the times, and produce a Cylinder that gives the maximum of Light with the minimum of waste in undue pitting or falling to pieces. This has ever been our aim, and *year* by *year* we have by careful and scientific selection and treatment of raw material been able to give unqualified satisfaction to all buyers of our make of goods, this year we have again made marked progress and with the aid of new machinery contemplate placing upon the market goods that it will be very difficult to rival and *absolutely* impossible to surpass. Hitherto our Limes have been the object of imitation and emulation but our resources are *now* such that our "*New Limes*" are of such marked superiority over all others that we claim and *justly* so that for durability, freedom from undue splitting and pitting, for uniformity of size, perfect drilling and light giving properties they have "*No Equal.*"

Hoping to receive a share of your esteemed commands and thanking you for favours received.

We remain, Gentlemen, your most obedient Servants,

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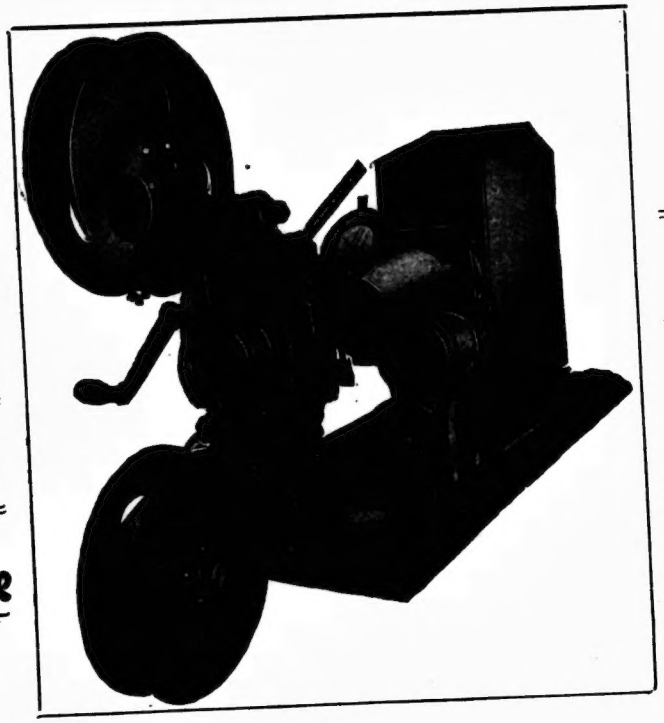

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A MAGAZINE for a specific industry needs a sufficient *clientele;* then, a chief who has knowledge of his subject, and who is known to the manufacturers and leaders of that particular profession; and, finally, a publisher who can select the correct channel for the sale, and who will assist to create a demand for the journal amongst those most interested. With these three essentials we make a bid for success. The gratifying remarks made by readers, advertisers, and the press, in reference to the issue we brought out in May, encourage us in our efforts to reach our ideal Journal—a publication that will become an indispensable reference book for all lanternists; a reliable help to the exhibitor in his selection of high class goods; and a sure medium for the manufacturer by which he is able to reach new and the right class of customers.

To the trade a Monthly Journal should be invaluable. New slides, recent films, special attachments, improved mechanism, and new lamps, come along with bewildering rapidity, and the busy lantern user can only decide their advantage to his particular outfit from the ofttimes too brief description found in the maker's list. We shall assist him with an impartial and thorough review of new goods, as samples are submitted and demonstrations given. Our advertisers should remember the advantages to be gained by a change, now and again, in the wording of their announcements, which are read by those actually interested. Our readers will materially assist in making the Journal successful, if they will mention that this magazine was the means of bringing them into touch with the advertiser.

As an educator, entertainer, or a hobby, the Optical Lantern holds a unique position. At the Board and Technical schools, colleges, and at meetings of learned societies, we find its utility indispensable for thrusting home most complex and sometimes uninteresting details necessary for the student to grasp. The readiness with which both young and old are better able to fix on their minds facts pertaining to history and life when the lantern is used, has gained for this method of instruction permanent and practical success.

CAN anyone imagine a more complete and more powerful agency for the spread of education than a well organised display of animate and inanimate objects, as they are reproduced upon the screen through the Lantern and the Bioscope? But apart from the deliberate arrangement of a lantern show, with the object to teach in view; as the casual observer—the man in the street—drops into the Music Hall, he learns, whilst his attention is arrested, that which he will not read.

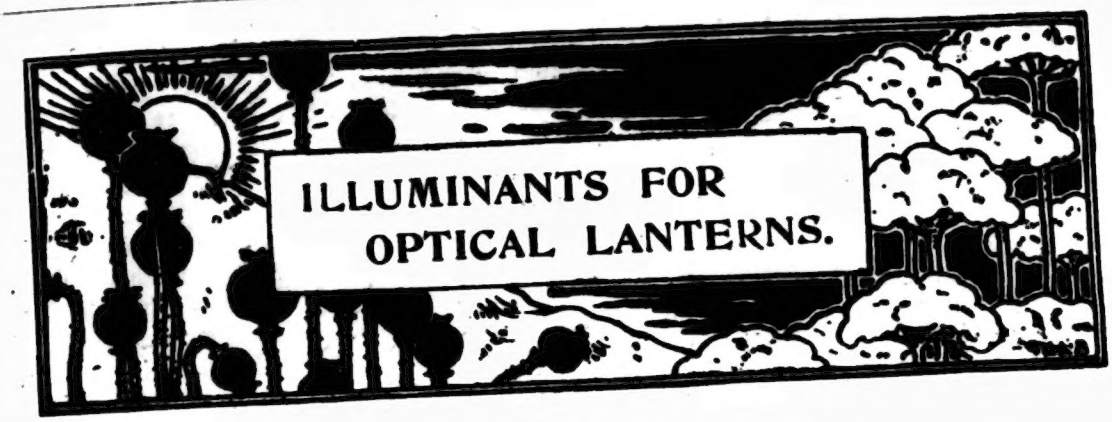
We now come to its use as a hobby. We are far from satisfied with its present uses in this direction, and are convinced that it is greatly because the general public regard it with something akin to awe, and are not aware how really simple and adaptable it can be made in the home circle. Fifteen years ago the magic lantern was in nearly every home, and lively recollections of boyhood days, with extravagancies in slides, lamps, transparent paints, and the other paraphernalia of a show, loom largely before us as we write. The dissolving view lecture was then at its height. We believe the home-made photo slides and living picture films will become as necessary adjuncts to the future home life as the old oil lantern was in the past, and we shall strive by articles from experienced workers, helpful hints and suggestions by experts, and the interchange of ideas in our correspondence columns, to so popularize the subject, as to make it easy for the veriest tyro to become conversant with so absorbing and pleasant a hobby.

From conversations we have recently had with the leaders of the trade, the revival in this form of entertainment bids fair for a big trade during the present season. The demand for new films, a cheaper form of film projector, and the desire for the hundred and one items needed in the successful outfit, show that operators are largely on the increase. France, as we all know, has been the seat of the industry, although the living picture was born in England, but new factories, new firms, and many new names are springing up on this side of the Channel, as showing the increasing trade. A rosy future looms ahead for those who have laid the foundations for future business. The present all-round depression has not, as far as we can determine, effected this business, and the manufacturers are in many cases hard pushed to supply demands.

It was a bright wheeze at the theatres to utilise the wait before the curtain is raised, or the interval between the acts in showing slides advertising leading businesses. It originated at the suburban theatre, where the local butcher or village candlestick maker could sit in his two-shilling stall and glory in a forty-feet projection of his advertisement. Now we find some of the best London houses have adopted the suggestion, which, by the way, is extremely lucrative to all parties, and what were previously tedious "waits" are turned into entertaining reviews of pictorial advertisements. This gives employment to operators, increases the slide business, and popularizes the lantern, besides being of interest to the spectators.

No one will deny, but that after watching a long series of animated pictures, the projection of an ordinary slide, comes as a welcomed pause, and as a source of restfulness to the eye. We are inclined to think that a more frequent use of some of the higher class coloured photographic slides, interspersed with animated projections, would tend to the ensurance of a successful show. We may even go so far as to say, that a film subject could be rendered more complete by the addition of ordinary slides made from negatives bearing on the film subject. It sometimes happens that the cinematograph operator, at the time of taking his pictures, will fail to include in the series just those phases of the subject that are of highest interest; hence it is that the use of an ordinary camera proves of great value in securing the missing points. But the more frequent use of ordinary slides at an exhibition is not merely that a film subject may be rendered more complete; it is rather of higher importance, that the audience may be put into a better mental and physical condition for the full appreciation of all that is to be seen. Let manufacturers and exhibitors alike, think seriously on these facts, so that we may look for programmes so arranged, and which, in our opinion, cannot fail to improve a show and bring entire success where partial failures now persist.

BRITISH MUSEUM



By Professor W. H. Golding,

Lecturer to the Late Royal Polytechnic, Birkbeck, Etc.

VARIOUS opinions have been expressed as to the relative merits of the so-called "blow-through" and "mixed" jets. In the former a jet of oxygen is driven into or across a gas flame supplied from an ordinary bracket or service pipe, which is thus caused to impinge with considerable force upon the lime cylinder. In the latter the gases are caused to mingle in a small hollow chamber at the base of the jet, from which they issue in an intensely heated but non-luminous stream to meet with the lime and render it incandescent. This jet requires both gases to be contained in cylinders, or otherwise caused to issue from the jet at the same pressure, and there can be no doubt that it is capable of producing a far more powerful light than the former, with the additional advantage of using rather less oxygen and forming a smaller luminous spot upon the lime, and it may be considered indispensable where a very large disc is required, and where, consequently, the rays have to be spread over a large surface. The mixed gases are, indeed, highly explosive, but with a well-constructed burner and in competent hands they can be used with perfect safety, especially if the gas is supplied in the compressed form, when it issues at too high a pressure to permit a back rush of flame, an occurrence not altogether unknown when gas bags were in common use, the pressure on which was liable to be suddenly reduced by the accidental fall or incautious removal of the weights from the bag while the gas was burning, thus permitting the flame to pass backward with disastrous consequences. An excess of oxygen will sometimes cause an unpleasant snapping sound, perhaps attended by the sudden extinction of the flame, an occurrence very annoying to the operator and alarming to the audience. But if the hydrogen supply be kept very slightly in excess, showing a little redness at the margin of the flame, no such embarrassing result need be feared. The lime must be kept turned so as to expose a fresh surface to the flame at frequent intervals, otherwise the light will suffer, and the heated gases may be reflected from the small pit or hollow which will be formed on the lime, and directed upon the condenser, probably causing the fracture of the lens, and the appearance of an unsightly mark upon the disc.

Blow-through jets are of various patterns, differing considerably in efficiency, but a good one should be capable of giving an illumination equal to about 200 to 250 candles, or about half that afforded by an average mixed jet, and consuming about five to seven feet of oxygen per hour. They have the advantage of requiring only the one gas to be supplied under high pressure, and offering little or no opportunity for explosive combustion, and are very well suited for use where a disc of moderate size is to be illuminated, and where a convenient gas attachment is at hand; but it is always desirable, before attempting their use in unfamiliar places, to be sure that such a supply is available, lest the building should prove to be lighted by other means or the nearest gas fitting be out of reach, when much inconvenience and disappointment may result, a disaster which the writer has more than once only narrowly escaped. Some modern jets of the "injector" type are considered to share the advantage of both the former patterns, and the best of

them probably leave little to be desired. In these the oxygen, entering at a high pressure, is caused to carry with it a supply of coal gas from any ordinary source, and to project the mixture in a combined flame similar to that from the mixed jet. It is desirable to recollect that an excess of oxygen, besides being wasteful, only tends to cool the lime and reduce the brilliancy of the light, but careful trial alone can determine the right proportion of the two gases in any particular instance.

Care must be taken to select a jet, of whatever pattern, which projects the heated gases upon the lime at such an angle that the nozzle does not come between the luminous spot and the condenser so as to cast a shadow upon the latter, otherwise the shadow will appear upon the screen, and disfigure the picture not a little. The pressure at which gas issues from a cylinder in which it has been forced to occupy a small space, is so great that its flow cannot safely be regulated by means of the taps attached to the jets, which must be left fully open, and the regulation effected by opening or closing the valve of the cylinder itself. It is also a pressure which becomes reduced as the gas is discharged, and that which remains is permitted to expand, hence the regulation by opening the valve requires frequent attention if the pressure at the jet is to be maintained.

The necessity for these adjustments, and the risk of blowing off or bursting the flexible tubes conveying the gas, may be obviated by the use of a "regulator" or "governor," Beard's pattern being the one most generally used, which regulates the flow of gas automatically, and maintains a constant and uniform pressure throughout, from the first opening of the valve of the cylinder till its contents are exhausted, an event which is apt to occur very suddenly and almost without warning, rendering it desirable to be very sure beforehand that the cylinder contains sufficient gas to last through the exhibition, and to allow some margin for emergencies. Few occurrences are more annoying to all concerned than a premature failure of the gas supply and the consequent extinction of the light in the lantern, as those who have had to experience it know to their cost.

Where hydrogen or coal-gas cannot be readily obtained, or the weight and cost of a second cylinder are objected to, one of the various forms of "Saturator" may be used without any considerable loss of light, a mixed jet being employed. This illuminant is sometimes known as the "Ethoxo" light, and is a favourite one with many lanternists, the place of the hydrogen being supplied by the vapour of ether or some similar volatile and inflammable liquid. In the Saturator, several forms of which are in use, the oxygen supply is caused to divide, part of it passing over or through flannel or other absorbent material soaked with the ether or other volatile liquid, and being ignited as it issues from the jet, which it enters through the hydrogen tube, while the remainder of the oxygen follows the usual course until it reaches the mixing chamber, finally emerging in the ordinary way together with the portion impregnated with the inflammable vapour. In this, as in every case where the lime-light is used, the inflammable gas must be ignited before the oxygen is admitted, and allowed to burn until the latter has been turned off. The mixed gases cannot safely be ignited or extinguished. In no case should the Saturator contain any liquid ether, or more than can be absorbed by the material with which the saturating chamber is packed, on account of the extreme inflammability of the liquid. Care must also be taken that the light is not permitted to burn after the supply of ether vapour shows signs of becoming exhausted, and that a fresh supply of liquid is not introduced while the jet is in use or when an unprotected flame is burning anywhere near the apparatus. In fact, it is desirable to fill the Saturator by daylight if possible. Perhaps the Ethoxo is the form of oxy-hydrogen light most liable to be attended with danger, though in competent and careful hands it can be used safely, and may prove, in some cases, a very convenient method of illumination.

But the rapidly increasing use of electricity for lighting purposes places at the disposal of the lanternist by far the most brilliant, and, where the current is available, the most easily applied source of light at present known, nothing more being necessary than to connect the terminals of an arc lamp in the lantern with the electrical supply of the building, and to switch on the current, which is disconnected with equal facility when desired. The current is, however, usually supplied for lighting buildings at rather too high a voltage for lantern use, registering 100 volts or even more in many cases. If so, a

suitable resistance should be introduced to prevent injury to the apparatus, a current of 8 to 15 amperes, with a pressure of 60 to 65 volts, being the most convenient for the purpose in view. The electric arc is capable of yielding the most powerful illumination which we are at present able to command, and this without producing smoke, consuming oxygen from the air, or giving off any heated gases or other products of combustion to vitiate the atmosphere of the room.

The source of the illumination is far smaller than any we have noticed, and more nearly approaches the ideal point, hence the rays are more readily and completely received by the condensers and concentrated upon the object to be illuminated than those from any other source, the concentration of the light and its tendency to throw dark shadows, which is the chief drawback to its use for lighting large areas, being, for our purpose, its highest recommendation.

Several forms of lamp or holder for the carbon points between which the electric arc is produced, are supplied by the leading opticians and instrument makers, each of them possessing special advantages. The conditions to be sought for are: easy and simple manipulation, without the instrument being liable to get out of order; the production of a steady and uniformly brilliant arc, which shall always occupy the same position in the optical axis of the lenses, and shall emanate as nearly as possible from a single point the crater or luminous spot of the positive carbon pencil, for which purpose the negative point should be slightly in advance of the other, so that the crater may be formed at the edge of the positive carbon, and the whole arrangement slightly inclined in order that the rays shall be directed towards the condenser, instead of upwards or downwards, in which case many of them would be lost. The adjustment necessary to keep the carbon points at the right distance apart is best made by hand, for which purpose a lever handle is provided and easily moved by a slight touch of the operator's hand. A direct current is more available for the purpose than an alternating one, since in the latter the two carbon points become alternately positive and negative; and the point of greatest brilliancy is constantly, though very rapidly, changed from one to the other; but as many buildings are supplied on the intermittent system, the arrangements of the electric lamp can be adapted to its use if required.

Sufficient has been said to suggest the various illuminants which offer themselves to the lanternist, whether the beginner, the more advanced and ambitious worker, or the professional operator, whose demonstrations must be conducted on a large scale, and brought to the highest degree of perfection within his reach. It may be hoped that among the various systems of illumination suggested, each reader may find the one best suited to his own special purpose.

400 ARC LAMPS USED FOR CINEMATOGRAPH WORK.

ACCORDING to the *Scientific American*, moving pictures of the "Jeffrey-Sharky heavy-weight contest," undertaken with a cinematograph camera, the subject being illuminated by means of 400 arc lamps suspended above the ring; but it is stated that the heat occasioned much inconvenience to the combatants.

In the same paragraph an account is given of the use of the highly active Cooper Hewitt mercury vapour electric lamp, which was used in producing the series of photographs required for showing on the screen the effect of a machine shop about a quarter of a mile long. The camera was placed on a platform fifteen feet from the ground, suspended from an electric travelling crane; and the crane was moved slowly down the long aisle, about fifty feet in the rear of the Cooper Hewitt lamps, the latter being also suspended from a travelling crane moving at equal speed. The sixty-four lamp tubes were hung in sets of eight, on eight frames. They required only 30 to 40 kilowotts, or about one-fifth of the energy consumed by the four hundred arc lamps mentioned above.

There is no doubt but what the resultant series of pictures showed quite an appreciable illusion of stereoscopic effects when projected upon a screen, for the conditions under which the subject was taken seem to comply with those required in the production of a picture giving such results.

STEREOSCOPIC NOTES.

The Stereoscopic Projection of Animated Pictures.

The two-colour system of Stereoscopic Projection suggested by J. Ch. D'Almeida about the year 1858, has given birth to many so-called new inventions. Thus, in the Patent Journal for May 18th, of this year, may be found a description of an invention by Mr. Wordsworth Donisthorpe. Positive transparencies are made from two series of negatives taken by a cinematograph camera, and are then simultaneously projected and partly superposed on a white screen by light of complimentary colours. By viewing the screen through binoculars, the eyepieces of which are of the same tints respectively and homologously as the images, only one image is received in each eye, producing thereby the stereoscopic effects.

How Two-Colour Slides for Stereoscopic Projection may be made.

Gelatine plates are soaked for three minutes in a 1 per cent. solution of potassium bichromate made slightly alkalim by ammonia, and the plates are then very slightly raised and allowed to dry in a dark place. These plates are then exposed under ordinary stereoscopic negatives, the plate to be stained red being exposed about half as long again as the plate to be stained green, one hour and an hour-and-a-half being given as the approximate times; but the image ought to be distinctly visible as brown on a yellow ground. After exposure the plates are washed for fifteen or twenty minutes, and they are then left in suitable colour solutions for ten minutes, malachite green and ponceau. The colour loosely held in the more absorbent portions of the gelatine should now be rinsed out, it being of the utmost importance that there should be no general tint or stain. This done, the red and green transparencies are now superimposed and mounted as a single slide.

Plastographs.

The Germans, who are never behind hand in catching at anything with the slightest element of novelty about it, are responsible for the large green covered albums of views now selling in London and elsewhere at the very moderate price of one shilling. These anaglyphs, measuring about seven inches by ten, are printed from process blocks made from dissimilar or stereoscopic photographs. There are fifteen pictures in each album and a supplementary analyser supplied. Judging from the results obtained, it is evident that the separation of the two-view points from which the pictures were taken, could not be less than six inches, there being an exaggerated and therefore unnatural relief to some of the pictures.

"Magic Post Cards."

The same principle as that embodied in the Plastograph has been applied to Picture Post Cards. The upper portion of the card being occupied with the composite picture, whilst the lower portion forms a stereoscope, consisting of two perforations in the card, covered with red and green gelatine respectively. The latter portion being separated from the picture portion, the view may be examined therewith, when stereoscopic effect is the result. The Magic Post Card is now being sold by Messrs. W. Mate & Son, Ltd., Bournemouth, who are the proprietors.

Spectrograph.

This is another name for the Plastograph of the German, and consists of a post card printed precisely in the same way, and supplied with supplementary eyepieces. The makers, Messrs. Rose and Coop, of 135, Regent Street, London, also publish cards with an annexed flat, forming a stereoscope, which may be turned up and used for examining the picture without severing it from the same.

Bi-Photo Prints and Photoscope.

Yet another use for the two-colour stereograms. Messrs. Boot & Son, of 32, Fleet Lane, Old Bailey, are issuing similar pictures, which they call Bi-Photo Prints. They also have them in the form of a letter card. The two-colour analyser they call Photoscope. The subjects are very good, some of the prints being from photos by Mr. Horatio Nelson King, who is well-known for his excellent stereoscopic productions.

Stereoscopic Picture Post Cards.

In "Photo Review" for September 11th, a suggestion is made for stereoscopic picture post cards, the two elements being printed side by side, just in the same way as an ordinary stereoscopic slide is printed. The usual size of the post card now in use, is just big enough to permit of this, without serious trimming down of the prints. The idea is not new, there having been such cards on the British market for some time, put up in a box complete with glasses. It is, however, an idea that may be put into practice by members of

The United Stereoscopic Society.

Stereoscopic workers who desire to exchange prints, receive criticism of their own productions, and who wish an opportunity of seeing the work of others, should lose no time in joining this Society. The entrance fee is 1/-, with an additional 1/- as annual subscription. Full particulars may be obtained on application to the Secretary, Mr. A. J. Snow, of 84, St. Andrew's Road, Walthamstow, London.

SOME NOTES ON SLIDE MAKING.

IF we aim primarily at making lantern slides, without any intention of printing on paper, there can be little doubt that contact printing on the lantern plate is more convenient than reduction in a lantern slide-making camera. But as, putting aside certain small hand cameras, the quarter-plate size is the smallest that can generally be obtained, it is well in the first place to paste a lantern mask with an opening of three inches square upon the focussing screen, and also to rule in pencil two straight lines parallel to two opposite sides of the mask so as to mark out a space of 3 by 2 inches. The utmost amount of subject that can be included on the lantern plate will then be seen within the opening of the mask, and the smaller space of 3 by 2 inches will show approximately the limits within which, in a great majority of cases, it will be best to confine the subject. Two doublet lenses will be required in order to be prepared for all purposes, one of about three inches and one of about four-and-a-half inches focus. One of the modern anastigmats (such as Wray's Platystigmat, which I always use) should undoubtedly be chosen for the three-inch lens, as one that will cover sharply to the corners at full aperture is a great advantage, since, with so short a focus, stopping down to secure "depth of focus" will rarely be needed. If a second lens of the same series can be afforded for the four-and-a-half inch size, let it be purchased, but a cheaper lens, say a good Rapid Rectilinear, will do almost as well, as it may often be necessary to stop down to f/11 or even f/22 to get sufficient "depth" with a lens of this focal length, and this stopping down will be quite sufficient to extend critical definition to the corners of the lantern plate; using the back combinations alone of these two lenses we get two "single" or "landscape" lenses of six and nine inches focal length respectively, which will not show any departure from rectilinearity on the small area which is included in the lantern plate. It must, of course, be remembered that the stops become relatively smaller in aperture when one combination alone is used, thus f/8 must be read as if it were f/16; f/11 as if it were f/22, and so on. It is desirable that the camera should have an adjustment for raising the lens considerably without the bellows cutting off any part of the picture. It is far better to obtain what is required on the plates by using the rising and falling front than by using a swing back.

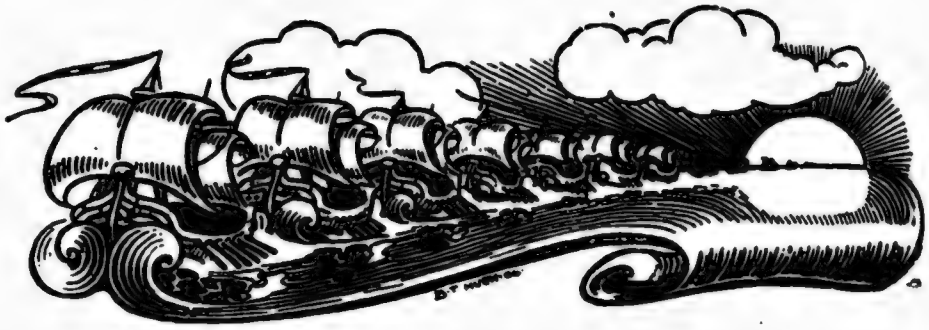
If by any chance it is found on development of a negative of an architectural subject that the vertical lines of the building converge, and it is impossible for some reason or other to make another exposure, it is not a difficult though perhaps a rather tedious matter, to make a distorted transparency by contact, either on a lantern plate or on an ordinary negative plate, by giving a few seconds' exposure to the flame of an ordinary candle placed at a distance of about a foot from the printing frame, and from this to make

a corrected negative by means of a camera, swinging the back of the camera and the distorted positive, through the same angle, in opposite directions until all the lines which should be vertical appear parallel on the focussing screen.

Much may be done by general or local intensification or reduction to fit a negative for giving the best possible slide that can be made from it, and reduction or intensification of the slide itself sometimes greatly improves it. If a thin negative has produced a heavy grey sky in the slide, it is possible to generally lighten it by a weak solution of ferricyanide of potassium and hyposulphite of soda, or to wash out fleecy clouds by a stronger solution of the same reducer applied with a small sable hair paint brush. Slides slightly veiled by fog or stained, may be cleared by immersing them in the same reducer, which has a tendency, however, to increase contrasts and may be used for this very purpose; slides that show too great contrasts may be much improved by the persulphate of ammonium reducer, which attacks and reduces the denser parts first, leaving the thinner parts but slightly altered. How much may be done by a judicious use of reducers will be seen from the following. A print of a very handsome cat, made by a friend, came into my hands. The cat was all that could be desired, but unfortunately the photographer had used as a background a white tablecloth which had been creased by folding. These creases entirely spoilt the picture, but as I wanted some cat pictures for a bazaar on behalf of a local cats' home, I asked for the loan of the negative. I first printed a transparency on a lantern plate by contact, and by means of a brush charged with the ferricyanide reducer completely washed out the background and slightly softened the edges of the cat's back that it might not have a silhouette-like appearance in the finished print or slide. From this transparency I made a negative on an ordinary plate, taking care not to under-expose or over-develope it. Thus the background was not perfectly opaque, and allowed some light to pass through when I printed on lantern plates or paper. The final result is a good slide with a light but not absolutely white background.

If we leave the making of slides required for next season's exhibitions till the season has begun, we may often, for want of time, allow poor slides to pass muster, but if we begin making our slides as soon as the present season is over, we shall be more critical and be able to spend more time over each subject, perhaps making half-a-dozen slides from one negative until we are satisfied that we have got the best that the negative will yield. Of course it is well nigh impossible to get every slide that we use to illustrate a lecture up to an ideal standard of excellence, yet with care and perseverance, and a resolve not to mind wasting a few plates, which, indeed, will not be entirely wasted since when the film is cleared off they may be used as cover glasses; we may at least succeed in getting a set in which there are no bad or even poor slides. One thing should be carefully avoided—monotony in colour in a set. I am somewhat sceptical as to the permanence of toned slides, but most brands of lantern plates are capable of having their colour modified by exposure and method of development, notably the slow series of those manufacturers who make two grades, rapid and slow. Full particulars are usually given on the sheets of directions packed in the boxes in which the plates are sold.

I once had an unpleasant experience. I was lecturing about a year ago, and a great number of the slides dewed as soon as they were put into the lantern, and the operator, after the lecture, told me he was unable to wipe the moisture off as the condensation took place between the glasses. How the moisture got there I cannot say; the gelatine had thoroughly dried before the slides were bound, but it is possible that the masks had absorbed some moisture from the damp atmosphere. It was the first time I had ever been troubled in this way, though I have made many thousands of slides. As a precaution I now always hold the transparency plate and the cover glass over a lamp till they feel warm just before binding them, and also thoroughly dry the masks. To save the trouble of unbinding and rebinding, the slides that were marked by this defect I scraped about half-an-inch of the binding from that side of the slide that would be at the top when put into the lantern carrier, so that any moisture between the glasses might escape, and this treatment was so far successful that when I showed the slides by means of an arc lamp at the Camera Club, no trace of dewing was visible.



THE PHOTOGRAPHY OF MICROSCOPIC OBJECTS.

I FEEL sure that many microscopists are deterred from practising photo-micography because they think there is so much difficulty about it, and so there probably is when working with high powers, and diatoms, test objects and when such subjects are photographed; but if the low or medium powers of the microscope are used, the microscopist will find it very simple, and with very little practice will be able to obtain tolerably good negatives, from which it will be an easy matter to produce effective lantern slides.

The apparatus absolutely required is very trivial. An ordinary-quarter plate camera, without a lens or stand, a few chemicals, a packet of dry plates (preferably a slow brand, as the silver bromide is in much finer state of division, and consequently able to render minute detail), one or two developing dishes, and a ruby lantern, in addition to the microscope—which, of course, every microscopist has,—this is all that is needed.

The microscope in use is to be placed horizontally, and is, therefore, in the same position as if the camera lucida were being used, the mirror being removed, or turned aside, as it will not be required. The lamp—which is the ordinary small micro-lamp—must be placed with the wick turned edgeways, and care must be taken that the flame is exactly in the optical axis of the microscope. I find that if a small piece of camphor, say about the size of a hazel nut, is put in the lamp with the paraffin, in which it readily dissolves, it will most decidedly increase the whiteness and luminosity of the flame. The bull's-eye condenser must be placed between the lamp and the microscope, in such a position as will best illuminate the field.

Many workers remove the eye-piece from the microscope. I prefer to leave it in its normal position, for the following reasons:—First, because it enables a good magnification to be obtained with a camera of ordinary length; and secondly, because, whilst focussing the image on the ground glass, I can reach all the adjustments of the microscope without having to arrange any special apparatus for so doing. I am aware that by the use of the eye-piece a certain amount of light is lost, but that is of little consequence in using the low powers. For instance, with a 2-in. objective, a fully exposed negative may be obtained in from ten to twenty seconds, the object being, say, a fairly transparent section of wood, an exposure which no one could object to on account of its length.

The camera must be rigidly fixed and placed so that the eye-piece of the microscope will pass through the centre of the hole in its front, in place of the ordinary photographic lens. Of course, the junction between the microscope and camera must be made light-tight, but that is easily effected by wrapping a strip of velvet round the microscope tube until it fits in the camera front. It is advisable that a rough base board be made for the camera, which should project in front far enough to enable the microscope lamp to stand upon, as by this means the whole apparatus is made more rigid, which is a very essential point, as the slightest vibration or shifting will spoil the plate.

The focussing screen next claims our attention and my method, which is a modification of Mr. J. B. Dancer's, I will now describe. The ground-glass of the finest description is to be slightly warmed, and a piece of wax rubbed all over it. This will considerably increase the transparency and fineness of the grain. Now draw two pencil lines diagonally across on the ground side, and in the centre, where the lines cross, cement a cover glass with Canada balsam. This entirely destroys the grain and produces a transparent circle. There ought to be little difficulty now in obtaining a sharp image, but to make it still more certain, it is advisable to use a focussing glass. I use for this purpose a D eye-piece, with the eye-glass removed, and the cap made of such a length that when it is resting on the plain side of the ground glass the pencil lines are sharply in focus. If the focussing eye-piece is placed over the transparent centre of the screen, and the microscope adjusted until the object placed on its stage is seen sharply defined, it follows that the sharpest image is in the same plane as the surface of the ground-glass. When the focus is obtained the focussing screen must be removed, and the sensitive plate placed in its stead.

It will be as well to mention that the actinic and visual foci of microscopic objectives do not of necessity lie in the same plane, in fact, as a rule, the actinic focus is slightly beyond the visual. In the low powers this difference is sometimes considerable, and in the high powers so small that it may be entirely neglected. In consequence of this over-correction of the objective, on developing the plate, the image, which was accurately in visual focus, will be slightly indistinct, but as this error is constant, it may be very easily corrected in the following manner:—Place on the stage of the microscope an object having a slight thickness, and focus accurately any part of it, preferably near the centre. Expose and develop a plate, and in so doing be very careful not to alter the adjustments of the microscope, or to shift the objects on its stage. Now carefully examine the negative, and note the part which is in sharpest focus, then, having replaced the focussing screen, rotate the milled head of the fine adjustment until the sharpest part of the image seen corresponds with that of the negative. Make a careful note of the amount of rotation required to effect this, as this will be the correction that must always be made (with the objective in use) after focussing, and, of course, before exposing. With many objectives no correction is required.

If the negatives are for making lantern slides from, I would advise that the exposure be very full, so as to obtain a negative soft and full of detail. Use the lowest power objective that will give the necessary detail and enlarge the resulting negative if necessary.

One other point in conclusion—test your focussing screen and double back, and make quite sure that the ground glass and the sensitive plate are exactly in the same plane when in the camera. This is most important in micro work.

TO MAKE MONEY WITH THE LANTERN.

Is not the business "played out?" Has it not been overdone? Is there any money in it? These are questions sometimes asked us, generally founded on the recollection of some old-time "Magic Lantern Show" given with an inferior instrument, and a collection of slides either of poor execution or relating to subjects of little interest to the audience, or else founded on the failure of some exhibitor who had not the tact necessary to the proper conduct of the business, and who had, perhaps, failed equally in everything he had previously undertaken. In reply, we can only say that the business is not played out, nor has it been overdone. That there is money in it when judiciously managed has been shown by the success of well-known lecturers, who have conducted the business profitably for years, and through whom the public have been made aware of the instruction and pleasure derived from an entertainment made up of slides of good quality, illustrating subjects that are of interest to the general public at the moment. Public taste is improving every year, and there is always an opening for a man with energy and good judgment.

HINTS ON CINEMATOGRAPH WORK.

Economy of Film.

The living picture as applied to scientific demonstrations, is becoming more popular every year; and it is found that by its aid natural phenomena of a very complex order can be clearly illustrated to an audience. It may have escaped the thought of some who use the cinematograph for the purpose indicated, that in many instances a very short strip of film suffices to fully demonstrate certain subjects. Thus for example, the evolution of dropping water; the successive phases of a steam engine at work; or the flight of a bird. It is evident that in such cases, precise composition, position, and movement, are duplicated after the first evolution is completed, hence it is unnecessary to have a repetition of the same phases on a long film, if the short length is made to include a complete series, and the two ends of the film are joined so as to form an endless band. It is obvious that this endless band may be passed through a projector and the subject shown upon the screen for any length of time. It should be noted however, that it is of the utmost importance, that the succeeding pictorial phases on either side of the join should be complimentary to each other, *i.e.*, should be the ones in the order of the evolution of the subject treated.

Good Pictures Badly Shown.

Unless rock steadyness of a camera stand has been secured whilst taking the original negative, it is beyond the power of the exhibitor to produce perfect steadiness of the projected positive, and under such circumstances the operator must be content with focussing up as well as possible. But we have seen some operators allow a good picture to be spoiled, when exhibited, by their neglect to rigidly fix the projector stand before commencing a show. The natural consequence of such an oversight is that the eyes are called upon to constantly change the direction of their axes in order to follow the picture, whilst the unrest thus produced prevents the mind from a full appreciation of the results otherwise obtained. The importance of these seemingly trivial details cannot be overestimated, and a comparison of sensations produced, with and without a steady picture, can only show their full significance. Were the movements of the picture upon the screen horizontal, the evil would not be so great; in fact, a varying position horizontally is not found to seriously interfere with the final results in the mind, whereas a vertical change instantly upsets the law of visual direction.

Need for a Standard Speed.

It is a well-known circumstance of Anima-photography, that unless the projecting of the subject upon the lantern screen is conducted precisely at a speed corresponding to that at which the negative picture was taken, false representations of nature will result. It is true that certain cinematograph cameras are provided with speed indicators, by which the operator is able to ascertain the rate at which he is passing the film through his camera; and it is also a fact that an operator may become so used to his work that he is able to sustain a uniform speed without resorting to any such guide; but to obtain satisfactory results at the time of exhibiting a positive from a negative so produced, it is absolutely necessary, as we have already intimated, that the picture be passed through the projecting apparatus at a regular and corresponding velocity. There is no reason why a standard, both for taking and exhibiting a picture, should not be established, just as we have to-day a certain recognised pitch for perforating films. If some practical hand, with money and brains, would give this question serious consideration, and finally establish a suitable standard for speed, he would be rendering a service to the anima-photography world of inestimable value. We should then rid the art of illusional freaks, which, though curious and interesting, are undesirable. Our beloved art becomes a cause for laughter when men march at a running speed; when artillery guns skate over the ground on carriages with stationary wheels; and when the wheels on the Royal carriage revolve backwards. We should be glad of any data on this subject.

Illusions.

When we note the various illusions to which the art is subject, it becomes a problem taxing the greatest genius, how best to avoid giving false effect upon the screen. Some effects are difficult of dismissal, owing to the complex composition of the subject; thus, in a street scene we have, perhaps, many vehicles coming and going at unequal speeds. If the wheels on one happen to revolve at a speed corresponding exactly to the speed of our apparatus; if we are taking sixteen pictures per second, the wheels on the vehicle turns once per second, and there are sixteen spokes to a wheel; then, though the body of that vehicle is seen to travel, the wheels appear still. It is evident that by adhering to a standard speed for taking, we shall not dismiss such illusions; and the falsehood must be otherwise removed.

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Our Suggestion Bureau Coupon.

NOVEMBER, 1904.

See Page 21.

Name.....

Address.....

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A WORD OF PRAISE.

The following are a few extracts from the many encouraging letters we have received.

"There is a wide field for a Journal of this description. It should prove very acceptable to operators who are cut off more or less from immediate contact with the cinematograph world."

JOHN TOPPING.

Wellington Terrace,
Waterford.

DEAR SIRS,

I was very glad to get your circular the other day, and to find that our old friend the "LANTERN JOURNAL" is to have yet one more resurrection. I was a subscriber to the two last series, and for about nine years welcomed the issues month by month as they were published. I am sure I wish you every success in this latest venture, for the intelligence that the "JOURNAL" was not to be published again, some months ago, was to me bad news. We want to know of the progress of Lantern affairs in various parts of the world, and especially in regard to new apparatus, &c. I hope that this time you will have the support that will ensure the continuance of a valuable journal, and that all Lanterndom may be benefitted by your endeavours. The great misfortune of the Lantern is the many bunglers who are at work with it, and who by their inefficient use of the instrument cause a feeling of disgust in many circles whenever the "Magic Lantern" is mentioned. Could you not suggest a new and more respectable name for us?

I am asking my bookseller to regularly supply me with copies month by month, and you shall hear from me, if anything occurs to suggest a communication.

Yours faithfully
JAS. TAYLOR.

Richmond House,
Penzance.

MR. R. J. MOSS, of 98, Snow Hill, Birmingham, the well-known maker of acetylene generators, informs us that he has appointed Mr. E. G. Wood, of 2, Queen Street, Cheapside, to be his London agent.

IN the Queen's Hall, Edinburgh, Messrs. Fraser and Elrick's up-to-date show of animated pictures is having a successful season, and also at the Operetta House good audiences are the order of the day. Their two latest, Algy's Troubles and An Excursion to Bournemouth, are well received.

Chats with Trade Leaders.

No. 1.—Mr. CHARLES URBAN.

IF I were asked for a personification of a human being born with schemes years ahead of the present generation I could not do better than turn to the subject of our present interview.

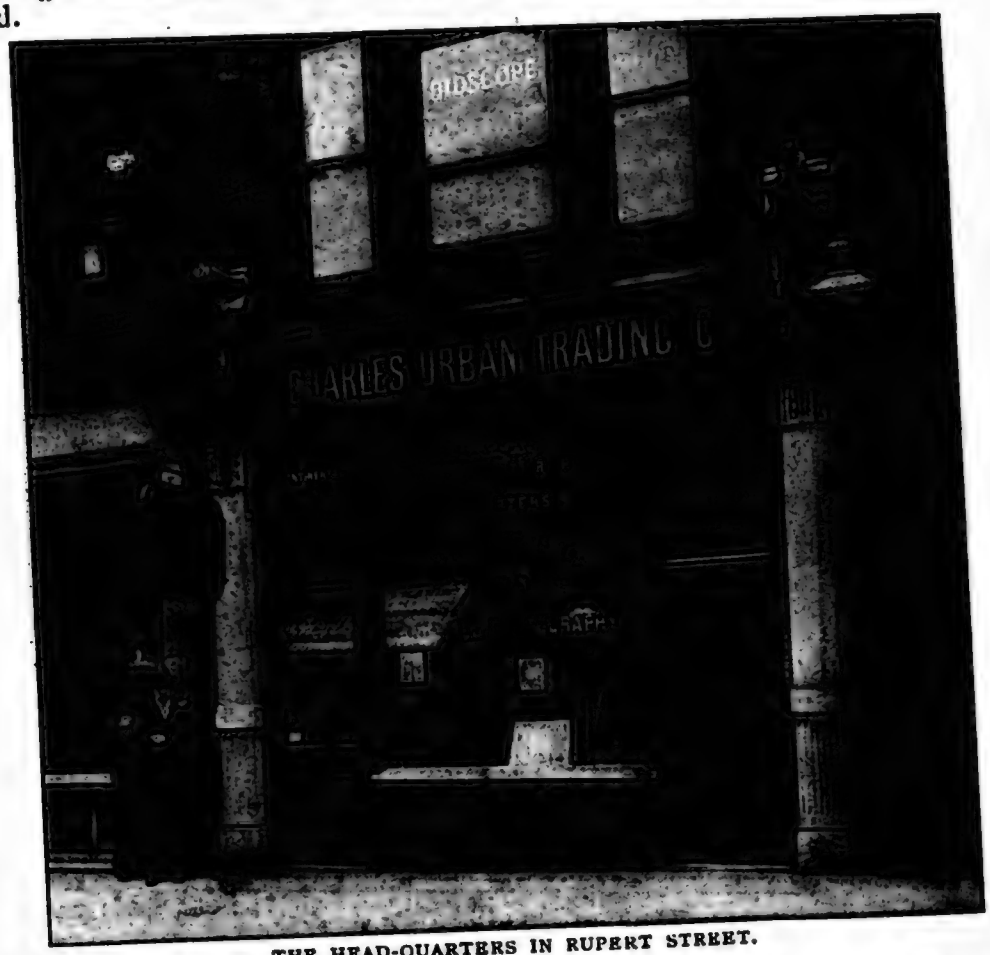
When the phonograph was comparatively unknown ten or fifteen years ago, Mr. Urban was one of the leaders of the trade in America. He was running fifty talking machines in a phonograph parlour in Michigan, and the kinetoscope coming along, he saw its possibilities, and immediately added it as another attraction. Taking another step we next find him exhibiting the Edison Manufacturing Co's. "Vitascope," and for this he purchased films from Messrs. Maguire and Baucus, in New York, the manager of the firm being a former manager of the North American Phono' Company. By this time he was getting into the swing of the living picture trade, then in its infancy, and after seeing the need of a more compact and perfect machine, he invented the bioscope, which has perhaps done more to popularise optical lantern entertainments than any other invention, and which is now a byword with the Man in the Street.

Crossing the Herring Pond, he managed the British business of Messrs. Maguire and Baucus, and for six years was the leading man of the Warwick Trading Company, from whom two years ago he severed his connection, and started the Urban Trading Company, which has been so prominently brought before the general public.

Mr. Urban is a busy man, and after visiting Rupert Street five or six times, we finally ran him to earth on his return from Paris. Having then to wait some while for him, plenty of entertainment was afforded by the business rush in the waiting room. A fire engine was heard galloping on its way to the recent Chelsea fire, and immediately an

operator rushed off with an emergency camera, nearly upsetting us in his anxiety to secure a good picture. Next, an interesting discussion between two Frenchmen as to the respective merits of some of the latest films was of particular interest, as were the hundred and one enquiries and telephone messages, which we could not help hearing. It showed how alive the firm is, and the business they are doing.

At last we were ushered into the private office, and found a comparatively young but determined-looking man—a man whom one can well picture as born for the trade. Quick to grasp, act and improve on ideas, methodical to a fault, not an easy man to argue with, but one willing to listen patiently, and give a word of approval or censure when the case necessitated.



THE HEAD-QUARTERS IN RUPERT STREET.

"Mr. Urban," said our representative, "we are starting a journal in the interest of the optical lantern and cinematograph trade, and as we are giving monthly interviews, thought you would make an admirable 'first.' Do you think the business warrants a trade organ?"

"It's funny, but I thought of starting one myself," was the reply. "Yes, I believe we want a journal, and I'll give you a tip—your magazine must be absolutely reliable and truthful to ensure success. Speak fearlessly, and you will ultimately get support, but once let your readers see you are biassed, or show favouritism, and you may as well shut up shop. In our trade, unfortunately, there has been so much—what shall I call it—'exaggeration,' that it will be a relief to turn to a dependable quantity."

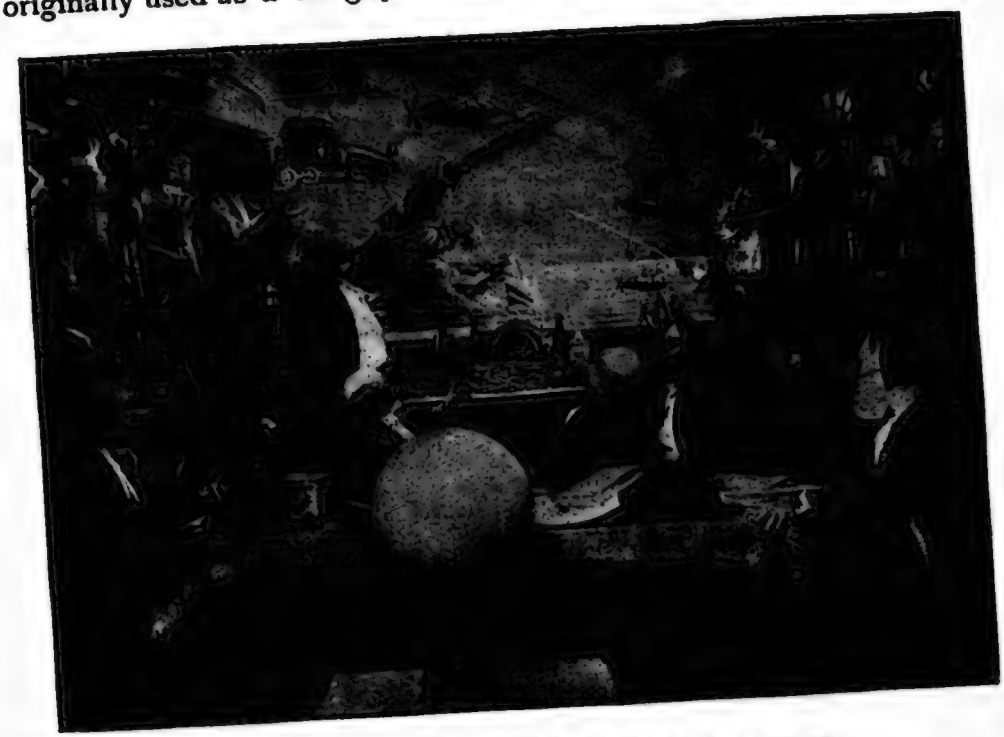
"Then in your opinion the trade is ripe for a paper of its own."

"Well it depends on the paper, of course, but there is undoubtedly a greater interest in projected pictures to-day than ever, although I deplore the class of pictures that film makers mostly cater for—I mean those depicting crime, immorality, foolhardiness, drunkenness and other vices. We have decided to refuse to pander to these low tastes, and to so raise the standard of our films that they stand a head and shoulders above all other

competitors. We recognise the value of the living picture as an educator. Is not the time within reasonable distance when series of films will be manufactured to illustrate every department of science and art—a library of such films being a necessary equipment of colleges and polytechnics to demonstrate lectures? No doubt you remember that fine series of microscopic studies, which were so popular at the Halls, and also remember our wonderful films of the bees and their habits. We are just producing a similar one of ants. We do not confine ourselves only to natural history; for instance, we are busy on the silkworm, with its varying phases of life, until we find it in the cocoon, at which stage we do not leave it, but go on to show the manufacture of the silk in all its departments, until the culmination is reached in the latest Paris creation. I could cite you many instances of high-class films that we are hard at work on, in fact, Professor Duncan is just off to South America for a two years' tour, which we expect will reap some wonderful achievements for future use."

"Are you not exhibiting at the Alhambra?"

"No, we do not exhibit at all. We supply the films at the Alhambra, and the management have become so thoroughly convinced of the importance of the 'turn,' that what was originally used as a fill-gap whilst scenery was being refixed, is now a 'star



A COMPREHENSIVE PICTURE FROM THE NEW SERIES.

turn' in the centre of the programme, enlivened by the finest music and received with rapturous applause. They acknowledge that a turn of like attractive value would cost from £75 to £100 nightly, and so well are the management satisfied that the policy of high-class work is the best, that they have fixed up a two years' contract. As an instance of my anxiety to be up-to-date at this establishment, take the French race in which Pretty Polly ran. The race was run on Sunday, and on the Monday following we were showing views at the Alhambra. Although it cost a large sum to obtain the pictures, and even though the films may not be required again, we recognise how such quick work appeals to our pleasure seekers."

"Do not the provincial managers also seek the best pictures?" we asked.

"I am sorry to say the provincial managers do not yet realize the due importance of the living picture show," was the regretful answer. "As long as they get a set of films that will keep the people quiet, and can run a 'turn' at a cost of two or three pounds a week, they seem satisfied. If they would only see the advantages of utilizing the best

and most up-to-date subjects, and would produce the pictures at a suitable part of the programme, and would also raise the standard of their subjects, they would soon find the huge reception worthy of the additional expense."

"Talking of expense, Mr. Urban, what is about the cost of your films per foot?"

"Now, I see you are following the same error that is too prevalent in the trade. You seem to think films should be bought as is tape or ribbon. *We* charge for the subject, and, of course, that varies with the trouble and expense we have in taking it. For instance, that wonderful series we have just produced which, bye-the-bye, I cannot find a comprehensive title for, but which might be called "Jules Verne Outdone," has cost £1,300 and five and a-half months hard work to produce. It is one of the most wonderful and complex subjects ever undertaken. It was invented and produced by Mr. G. Melies, inventor of the Trip to the Moon, and I have offered a prize of £10 as a competition for the most suitable name for the subject. It presents an extraordinary voyage by fourteen members of the Eccentric Club, who utilise the most modern conveyances, viz., steam engine, automobile, airship, and submarine, in exploring the Universe and Celestial Sphere. Although it appears as though we traversed miles upon miles, the whole of the scenery was arranged in 25 feet. The motor-car is specially constructed with an iron framework, the houses through which it passes are of brick. The sun's face, with its gaping mouth, was taken from a human face, and the train and carriages which are seen to enter this capacious aperture were really taken into the man's mouth when the photographs necessary for the illusion were first taken. The exploration train effects are obtained by moving cameras mounted on heavy trucks laid down on regular rails. In obtaining a series of the Russian War pictures £1,200 has been spent in travelling alone up to August 30th. Because the Russian authorities would not grant him facilities to enter Manchuria, and being determined to get there, our agent bought three Siberian ponies and a sledge at famine prices. He was on that sledge for seventeen days crossing Lake Baikal. Then, again, the bioscope pictures of the Japanese troops have cost us about £150 monthly since the war started."

"And about the future, have you any new ideas?"

"Well, I don't want to tell you too much, but one novelty is an arrangement with the North German Lloyd Co. to take every phase of life on their fine steamer, *Kaiser Wilhelm II*. The engine rooms, stokers at work, kitchens, refrigerators, and other dark quarters are our chief worry, but I have had constructed a special camera, the lens of which is sixteen times more powerful and the diameter twenty-four times greater than the ordinary type of lens. The heat in the stokehold is almost purgatorial. The pictures will be taken at 16 per second, allowing an exposure of 1-35 sec. I estimate it will cost from start to finish £1,200 to £1,500."

Queries.

In sending Queries, readers are requested to write as concisely as possible on one side of the paper, each question on a separate sheet. Name and address of sender to be given for reference. We are not responsible for the opinion expressed. Readers are invited to reply to Queries, and should state number and title of same.

1 **Cinematograph Film.**—Can any reader tell me how to remove the gelatine from celluloid support without dissolving the former?—S.H.

2 **Inventor of Living Pictures.**—Can a reader furnish facts on this conflicting subject?—J.

3 **Focus of Objective.**—I have a 9in. focus objective lens and wish to obtain a 10ft. disc on the screen; what distance should lantern be from screen, and if I cannot get far enough away, what is the remedy?—H.N.

4 **Power of Lights.**—What is the respective candle power of an incandescent gas lamp, an electric ditto, a Nernst-Paul and an arc?—N.J.

5 **Public Performance.**—I have an Urban Bioscope Projector which I use at home. I am frequently asked to show at a Mission Hall, bu believe the authorities have to be notified to ensure safety from fire or else an iron screen provided. Can you tell me exactly what is right as I do not wish to incur liabilities?—J. DANES.

The Nernst-Paul High-Power Electric Lantern Lamp.

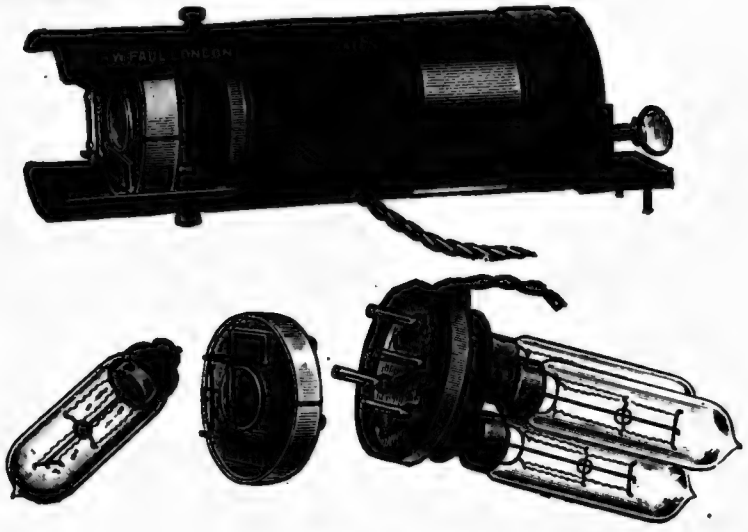


FIG. I.

After a long series of experiments, Mr. Paul has succeeded in producing an electric incandescent lamp that gives a most powerful light, without excessive heat, and entirely without smell; but these are not the only qualities that should ensure a huge sale of the Nernst-Paul, since it also possesses the advantage of being simple in the extreme. It may be connected to any electric supply system, and takes a current of about three amperes; in the same lamp a burner may be used, suiting either direct or alternating current, or for pressures of 100, 200 or 250 volts, a different burner being required for each of the systems of supply. It is fully equal in power to a blow-through jet, and will take its place in the many halls where house-gas has been supplanted by electric light, as well as in almost all amateur exhibitions where current is available, as it may be connected to any ordinary lamp socket.

The burner, which is shown separately, is in the form of a porcelain disc, carrying a number of rods or filaments, composed of rare earths, and is detachable from the lamp, being provided with sockets at its back, which fit on to pins on the front of the lamp, and make the connections to the filaments. The filaments are supported by small brackets on the front of the burner, and may be separately detached from the brackets for ease of renewal, each being provided with two small connecting plugs for the purpose. Some caution is necessary in handling these filaments, for which reason the lamp is formed with a projecting hood, which protects them when in place in the lamp.

In circuit with each filament, and contained in the body of the lamp, is a resistance of iron wire enclosed in a glass bulb fitted into a bayonet socket. These resistances are used to steady the current, and also to protect the filaments by acting as fuses in case of excess of pressure.

On switching on the current the filaments do not at once light up as in an ordinary incandescent lamp, but require preliminary heating with a spirit lamp, until redhot, when their resistance falls, thus allowing the current to flow; they continue to give out light until switched off. For convenience in heating the filaments the entire body of the lamp is

made to revolve, so that the filaments may be turned from their normal vertical position to a horizontal one, in which the flame may play evenly upon them. Beyond connection to the electric system, no other preparation or attention is needed.

Lanternists travelling from town to town, will, if the supply systems are of different voltages, find it convenient to have two or more burners to suit the different systems; they are comparatively inexpensive, and may be interchanged in a few seconds.

The complete outfit is supplied at the price of a good lime jet, and the lamp body is fitted with a bracket which may be clamped either on the quarter-inch pin of an ordinary lime-jet tray, or on the universal adjustable or plain stands which are supplied for the purpose. The illumination obtained is sufficient for showing a disc ten feet in diameter in a hall of moderate size. The candle-power is about 9 times that of the usual "Nernst" lamp. The light is of high actinic power and specially suitable for photographic enlarging or printing. Its warm tone fits it for stage lighting. No alteration in the lantern is necessitated, and the apparatus may be installed in a few minutes, without the need of external appliances.

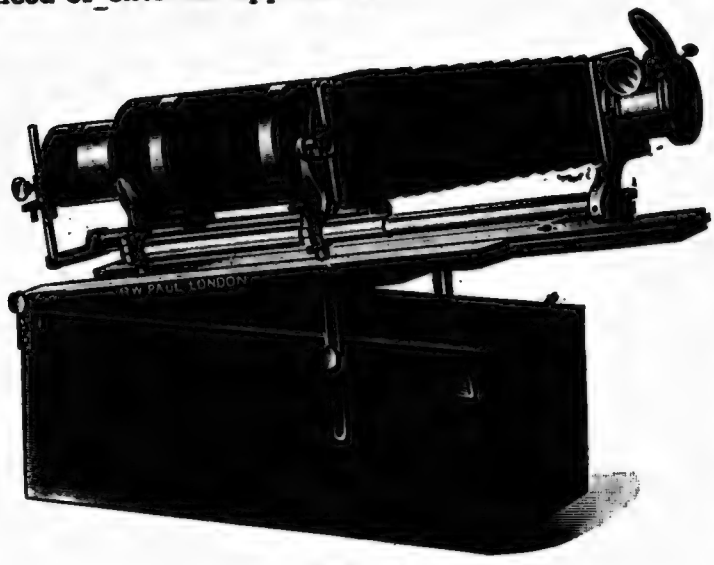


FIG. 2.

To take full advantage of the conveniences of this remarkable illuminant, a compact and portable lantern (Fig. 2) has been designed, and is constructed entirely of metal. It takes any objective up to 10 inches in fours, and may be used for vertical as well as horizontal projection, in that case requiring anly the addition of a single reflector.

For travelling purposes the lantern is fitted into a case whose lid forms a base-board to which the lantern may be fixed. By unscrewing the lid and reversing its position on the box it becomes a stand capable of adjustment, so that the lantern may be tilted to any desired angle. We were surprised, during the practical demonstration, of its use, to notice the steadiness of the light, and the equal distribution of the same over the whole disc projected upon the screen. We strongly recommend our readers to obtain any further details they may require from the manufacturer and patentee, R. W. Paul, 68, High Holborn, London.

Fallowfield's Clockwork Magnesium Lamp.

Mr. J. Fallowfield, of 146, Charing Cross Road, W., has just placed upon the market a magnesium lamp worked by clockwork; especially useful for illuminating dark interiors, mines, etc., or for copying purposes. The clockwork is fitted into solid brass casing, on iron pedestal, parabolic reflector with ground-glass front. Chimney to carry off smoke, double brass reel to take two 1 oz. coils of magnesium ribbon, which can be burnt separately or together.

The price of the lamp complete is £3 10s., whilst suitable magnesium ribbon sells at 1/6 per 1 oz. coil.

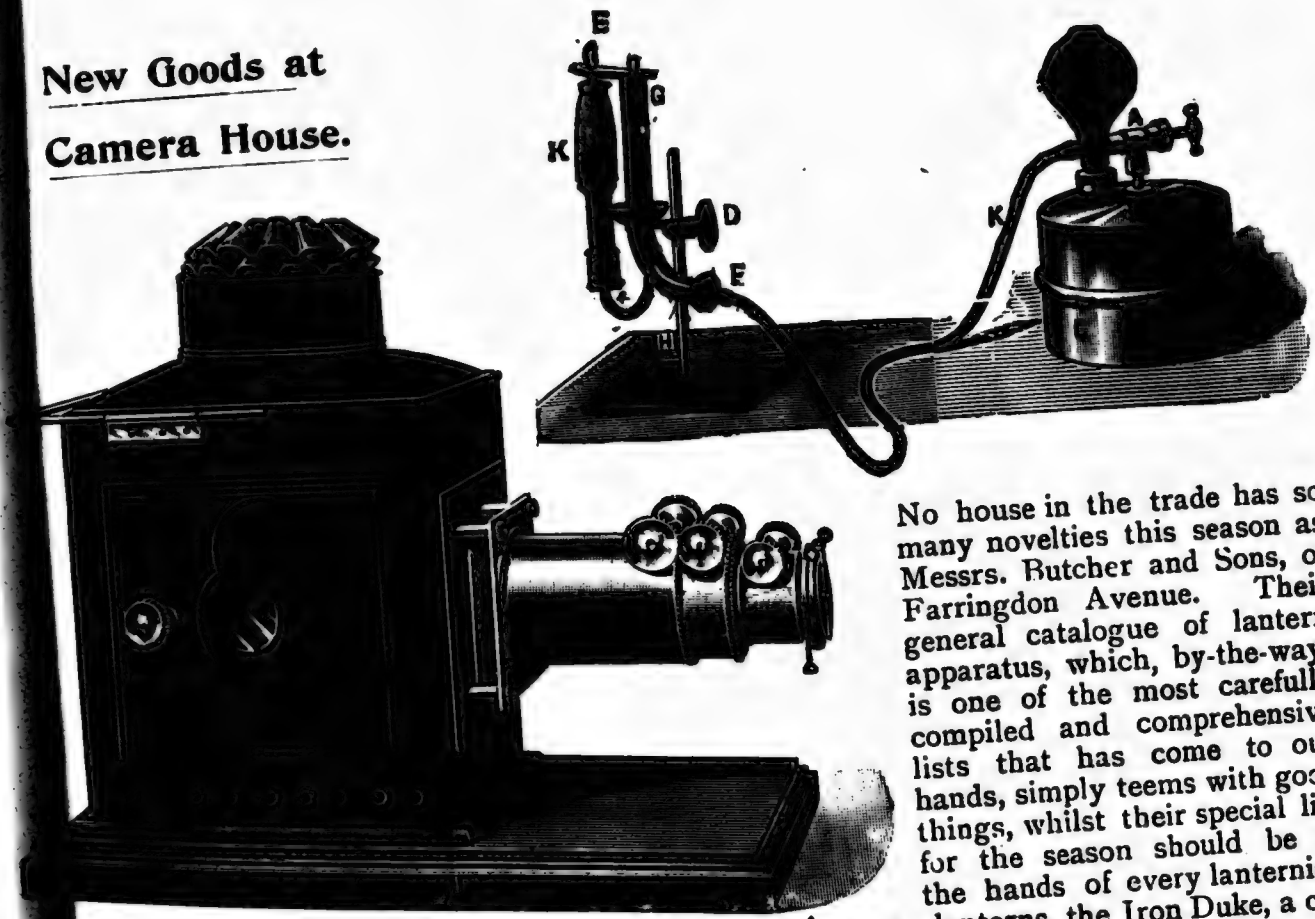
Special Hard Limes

From Messrs. T. S. Whitehall & Co., of Curzon Street, Nottingham, we have just received a sample tin of their lime cylinders. We intend submitting these to a thorough test, and report on their qualities in our next issue.

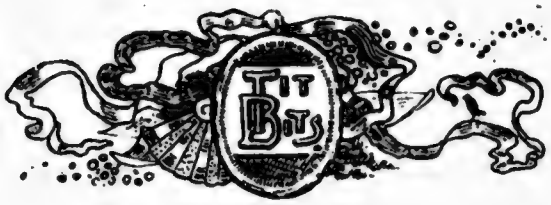
The Chronophone.

Messrs. Gaumont & Messter, of France, are to be congratulated on the degree of perfection attained in their Chronophone, which successfully synchronises light and sound. Mr. Bromhead, the firm's English manager, was kind enough to give us a private view of this clever combination. The two senses of sight and hearing were stimulated in a very agreeable manner, as we witnessed the actions of a blacksmith projected upon the screen, and heard, apparently from the workman's lips, the appropriate song entitled "The Village Blacksmith." Excellent as was this representation, we were even more agreeably impressed, when a negro made his appearance and sang a laughing song. It is evident that the inventors of this apparatus did not forget in their calculations to make allowance for the inequality of speed at which light and sound travels, for we observed that the synchronisation was well nigh perfect.

New Goods at Camera House.



No house in the trade has so many novelties this season as Messrs. Butcher and Sons, of Farringdon Avenue. Their general catalogue of lantern apparatus, which, by-the-way, is one of the most carefully compiled and comprehensive lists that has come to our hands, simply teems with good things, whilst their special list for the season should be in the hands of every lanternist, operator or user, who desires to be up-to-date. Among the lanterns, the Iron Duke, a cut of which we reproduce, is worthy of special mention. It is specially built for electric light, but can be suited to any other form of illuminant. It is made of a handsome iron body, of large size, with oval cowl, door and sight-hole, with three-draw telescopic front. The diameter of the lens is $2\frac{3}{8}$ inches, while the condenser is $4\frac{1}{2}$ meniscus and biconvex in brass cell. Their new Exhibition tripod stand, with turntable top, is a useful portable addition to any outfit, and has the advantage of being quite rigid when in use. The "Eclipse" Spirit Incandescent Lamp, illustration of which we also show, gives 130 to 150 candle power without a reflector, and is free from danger in use.



THE NATIONAL SUNDAY LEAGUE have introduced animated pictures into their Sunday programmes.

LOOK out for a new style of home cinematograph projector, at two guineas. Rumour reaches us that more than one firm will startle the trade in this direction shortly.

ON Monday, October 10th, at the Parish Hall, Northallerton, the Rev. Walter A. Dark, M.A., delivered a lantern lecture entitled "Australia, the Land of the Golden Fleece."

THE announcement in our advertisement pages of the Nottingham Lime Cylinder Co., who have been established upwards of twenty years, should be noted by all users of the oxy-hydrogen light.

THE NEW CENTURY CO. at Picton successfully exhibited a local subject—the processions, etc., in connection with the Church Congress. This proved a great attraction, as evinced by the large audiences.

IT was a tribute of honour that the United States Commissioner paid to Messrs. L. Gaumont & Co., when he selected their "Professional Chrono" as a suitable cinematograph machine for use at the St. Louis Exhibition.

TO sustain a growing interest in Living Pictures at the Alhambra, Mr. Chas. Urban will have his work cut out. We think, however, that his progressive and enterprising disposition, for which he is noted, qualify him for the task.

A VERY comprehensive work, "The Book of Photography," published by Cassell & Co., now being issued in parts at 7d. each, is to contain a section on "Animated Photographs." We shall advise our readers when this part is ready.

LANTERN SLIDE COMPETITION.—Messrs. Elliott and Sons, Limited, Barnet, Herts., are offering prizes valued at £500 for Lantern Slides and Prints made with Barnet products. This competition closes on December 31st, 1904.

RALPH PRINGLES, of the North American Animated Photo Co., evidently believes in adding subjects of local interest to a programme. At Nottingham recently, he showed a picture of the local football match, which was much appreciated.

WHEN at Preston, the Continental Bioscope Co. exhibited amongst other pictures Troops in Tokio, Marching to the Seat of War, A Fight on the Yalu, and the Japanese War Ship, Mikasa, under full headway and in action.

MR. GEORGE W. WALKER, Manager of the Royal Imperial Picture Co., had a good programme at the Town Hall, Banchory, on October 7th. Besides the topical subjects of the War in the Far East, Britain's battleships and torpedo boats in action were shown.

COUNCILLOR HIBBERT has conducted tours from London's Polytechnic across Norway and Sweden, and is now visiting various towns in the United Kingdom lecturing on his journeys. These are aided by views of the countries, and animated pictures of Swedish timber and waterfalls.

MR. T. J. WEST, of The Modern Marvel Company, Limited, has just completed a very successful series of exhibitions at the Bath Saloon, Torquay. We understand that his next display will be given at the County Hall, Salisbury. We have seen a great many exhibitions of living pictures, but none to surpass those under the supervision of Mr. West.

OUR readers should write to Mr. Walter Tyler, of Waterloo Road, for his new supplementary list of Lantern apparatus. It is full of interest, and the new lines, including the improvements in his patent helioscopic lantern, are well worth noting. He finishes the book with some terse "gems" of information, which should be invaluable to the operator.

ACCORDING to the *Express*, a sensation has been caused at Vienna by the representation of the elopement of Princess Louise of Coburg, given at one of the principal theatres. The principal incidents of the Princess' flight from a German asylum, in company with Count Mattachich, are reproduced with startling realism.

LARGE audiences are assembling each day at the Regent Street Polytechnic, London, where Mr. Alfred West is showing his splendid series of animated pictures, depicting Our Navy and Our Army. Unstinted approval of these pictures was shown by Portsmouth people, who had the benefit of seeing them prior to their exhibition at the Polytechnic.

LANTERN LECTURES FREE.—"The Story of the Pianoforte," by Sir Frederick Bridge, and "The Food of the Gods: or How Britain is provided with Cocoa," are the titles of two lectures which, with lantern and slides, can be borrowed free of charge from Messrs. Eyre and Spottiswoode, for use during the coming winter.

THE "WALTURDAW" COMPANY, of Dean Street, Holborn, have many novelties for the season, and are thoroughly to the fore in everything connected with living pictures. Their Lending Library of Films is a speciality, and exhibitors all over the country avail themselves of this excellent method of varying their shows. The range of subjects is very wide, and is added to daily. The "Walturdaw" Projecting Lenses at 20/-, the Bioscope Sheets from 10/6, and the "Walturdaw" L.C.C. and Fire Insurance Iron Box, which they claim to be the most portable box in the market, and which is sold at £6 10/-, are some of their special goods. All the necessaries for Biograph Exhibitions may be had from stock, and the firm will be glad to forward catalogues on application.

APPLICATIONS FOR PATENTS.

From September 5th to October 8th, 1904. Compiled from the Official List.

No. 19114. Gerald John Pickering, 55, Chancery Lane, London:—An improved appliance for showing animated pictures.

No. 19139. Wilhelm Ledbauer, 46, Lincolns' Inn Fields, London.—Improvements in electric arc lamps for medical purposes.

No. 19232. Andre Blondel, 111, Hatton Garden, London:—Improvements in or relating to electric arc lamps.

No. 20391. Alfred Wreach, 4, South Street, Finsbury, London:—Improvements in or connected with condensers for optical lanterns.

No. 20439. Henry William Hamblin Palmer, 43, St. Martin's Lane, Charing Cross, London;—Improvements in mechanism employed in the production and reproduction of a series of photographic cinematograph pictures, animated; also mutoscopic and stercoscopic, to be actuated by coin-freed mechanism, and circular dark slide for holding sensitive plates and disc.

No. 19270. Ellis Smith, Junr., 17, Hanover Street, Keighley, Yorks.:—Improved apparatus for use in the production of acetylene.

No. 19422. Herbert John Haddon, 18, Buckingham Street, Strand, London:—Improvements in regulating mechanism for arc lamps.

No. 19568. Harry Kneebone Tompkins, 12, Hillend Gardens, Glasgow:—Improvements in the production of acetylene derivatics.

No. 19730. Marcus C. Hopkins, 8, Quality Court, Chancery Lane, London:—Apparatus for producing optical illusions.

No. 19833. William James Davy, 40, Chancery Lane, London:—Improvements in or connected with arc lamps.

No. 20019. William James Davy, 40, Chancery Lane, London:—Improvements in electric arc lamps.

No. 20433. John Green, 6, Hammerton Street, Leeds Road, Bradford, Yorks:—Improvements in the process of advertising by cinematograph and ordinary lantern slides.

No. 20477. Frances Leslie Mathew Forster and Jacob Bonn, 11, Carlyle Square, Chelsea, London:—A new or improved self-locking device for securing lantern trays and bases.

No. 21040. Frederick William Edward Schuer, 4, South Street, Finsbury, London:—Improvements in or connected with electric arc lamps.

No. 21042. Edwin Rudolph Grote and Milton Victor Ely, Palace Chambers, Westminster, London:—Improvements in and relating to electric arc lamps.

No. 21540. Jules Hippolyth Corthesy and Paul Frederick Boehringer, 13, Garlick Hill, Cannon Street, London:—Improvements in means of obtaining optical effects, as are called cinematographs or animatographs.

CATALOGUES AND BOOKS RECEIVED.

Catalogues, Price Lists, and all books for review should be sent addressed to the Editor, 34a, Castle Street, Salisbury, before the 20th of the month preceding issue.

We have received a copy of Messrs. Butcher & Son's "Lanternist's Pocket Book" for the coming season. It contains much information that cannot fail to be of service to all exhibitors. We understand that a copy will be sent free to anyone applying to Camera House, Farringdon Avenue, and sending two stamps for postage.

The Gutenberg Press, Ltd., have just issued their annual special issue of "The Optician and Photographic Trades Review." In addition to much matter especially interesting to opticians, it contains many matters pertaining to the optical lantern, and readers who are not already subscribers should at least obtain a copy of the special issue.

Mr. Jonothan Fallowfield, of 146, Charing Cross Road, London, has sent us his special price list of mounts for the Christmas season. Many new designs are offered this year, and to enable dealers and professional photographers to show their customers a good variety of designs to select from, without keeping a very large stock, on receipt of trade card and postal order for 5/-, Mr. Fallowfield offers to send post free a specially selected parcel of sample Christmas mounts.

The North American Animated Photo Company have been very much in evidence at Colston Hall, Bristol, during the past three weeks. They have shown some of the very latest films, including the "Invasion of the Sun"—which fantastic and spectacular production can be reckoned as one of the successes of the season.

Some marvellous dissolving view effects, combined with trick and mechanical slides, are used with great effect in a unique performance by Mdlle. de Dido at the Palace Theatre, London. It is one of the most successful turns.

As a relief to the excellent animated pictures at Maskelyne and Cook's Egyptian Hall Entertainment, Mr. C. W. Locke exhibits a number of beautiful trinoptic and other interesting lantern effects. They are accompanied by music on the mechanical orchestra, and receive splendid receptions from the audiences.

'LANTERN OPERATIONS.'

LIGHT AND SHADE.

One of the most fascinating photographic hobbies is undoubtedly the production of

Lantern Slides,

and those who are most likely to excel now that the dark evenings have set in are those who diligently employed their yearly summer holiday, or half-holiday rambles, in selecting their ground and have laid in a stock of good ½-plate pictures.

To those who have been in the habit of using ½-plates for this purpose, I would specially point out the advantage of taking my advice. ½-plates are all right for contact printing, but there is a double benefit derived from the ½-plate negative. Should you wish to omit from your slide a faulty portion, you can more easily do so, and secondly—and this is the principal benefit—you can, by *reduction*, obtain a much sharper definition, so valuable in producing good lantern slides, a thing one cannot expect to do from a ½-plate, unless indeed you reduce the size of your picture and mark in the edges of your slide; a waste of time, material and effect.

Talking of

Lantern Lectures,

reminds me of many little episodes which happened in my experience some years ago, many very amusing, and many instructive. One or two of the latter, especially if associated with the former, will not come amiss, for I take it there are a number of lecturers—amateurs principally—who at times would be glad of a hint how to proceed under peculiar circumstances.

Some years ago I received an order to take a lantern and about 100 slides to a country village school. As time was limited, I took the first which came to hand, and upon my arrival found them a very nondescript lot, representing any and every subject under the sun. I understood that the rector merely wished my collection to supplement his own, he of course doing the necessary speaking; but I found his slides were some he had taken during a holiday trip through France, and many were not even labelled. He had, moreover, been unexpectedly called away, and "would I be so kind as to give the children the necessary explanations!"

With hasty maledictions upon the thoughtlessness of mankind in general and of the clergy in particular, I ran through my own stock, and gave a short and concise—very concise—description of each, delighting the children at the finish with a comic story, illustrated, which I was asked to repeat. Wishing to give some variety I called for a description of each picture as it appeared, and by the time I reached the last the answering shouts showed they were appreciated.

Then I started the rector's collection, and found the first few views easy enough. Victoria Station, Newhaven, the s.s. "Sussex," Dieppe harbour (I guessed this), and a French railway train. The next picture I passed in silence and hurried on to another. Where was I? For the life of me I couldn't tell whether we were at Dieppe again, Boulogne, Havre, Tréport or Dover. All I knew was it was a seaside resort.

What was I to do? Suddenly an inspiration seized me. Why not appeal to the children? No sooner said than done. "Can any boy or girl tell me what place this is." For an instant no reply. Then a little girl suggested Margate, and emboldened by her example, some half-dozen scholars ventured other places of interest, one even suggesting Battersea. Suddenly I saw a teacher stoop and whisper. Instantly a hand was raised and I knew I was saved. We were all out of it, for it chanced to be New Jersey, U.S.A., though how the teacher recognised it and how it came there I am unable to say. Still, I was content, and from now all was plain sailing.

For ever after I remembered my lesson, and repeat it now for the benefit of others:—"Never be ashamed to ask," even though it be of a child, but keep your ignorance in the background by whatever device you will. Of course this scheme works well at children's meetings, but what about the lectures to adults. How are they to be treated?

Nothing simpler, and the method I advance has this to recommend it. It has been practised by a clergyman of the Church of England, to my knowledge, as I was present to bear witness to the fact.

The scene which puzzled the lecturer was a slide which resembled as much as anything an encampment of soldiers by night. The subject upon which the gentleman was dilating was "Temperance." Here was a dilemma. How could the two things be reconciled? For a moment the speaker hesitated, then triumphantly remarked:—

"This picture speaks for itself, next please"

and we passed on.

How sublimely simple, and how true. To everybody present that picture spoke as plainly as possible. "What on earth can you see in me to remind you of the evils of strong drink unless you are yourself a victim of it."

HYDROXIDE.

BRITISH MUSEUM 28 MH 1905

Twelfth Year of Continued Success.

The "WALTURDAW" Co., Ltd.,

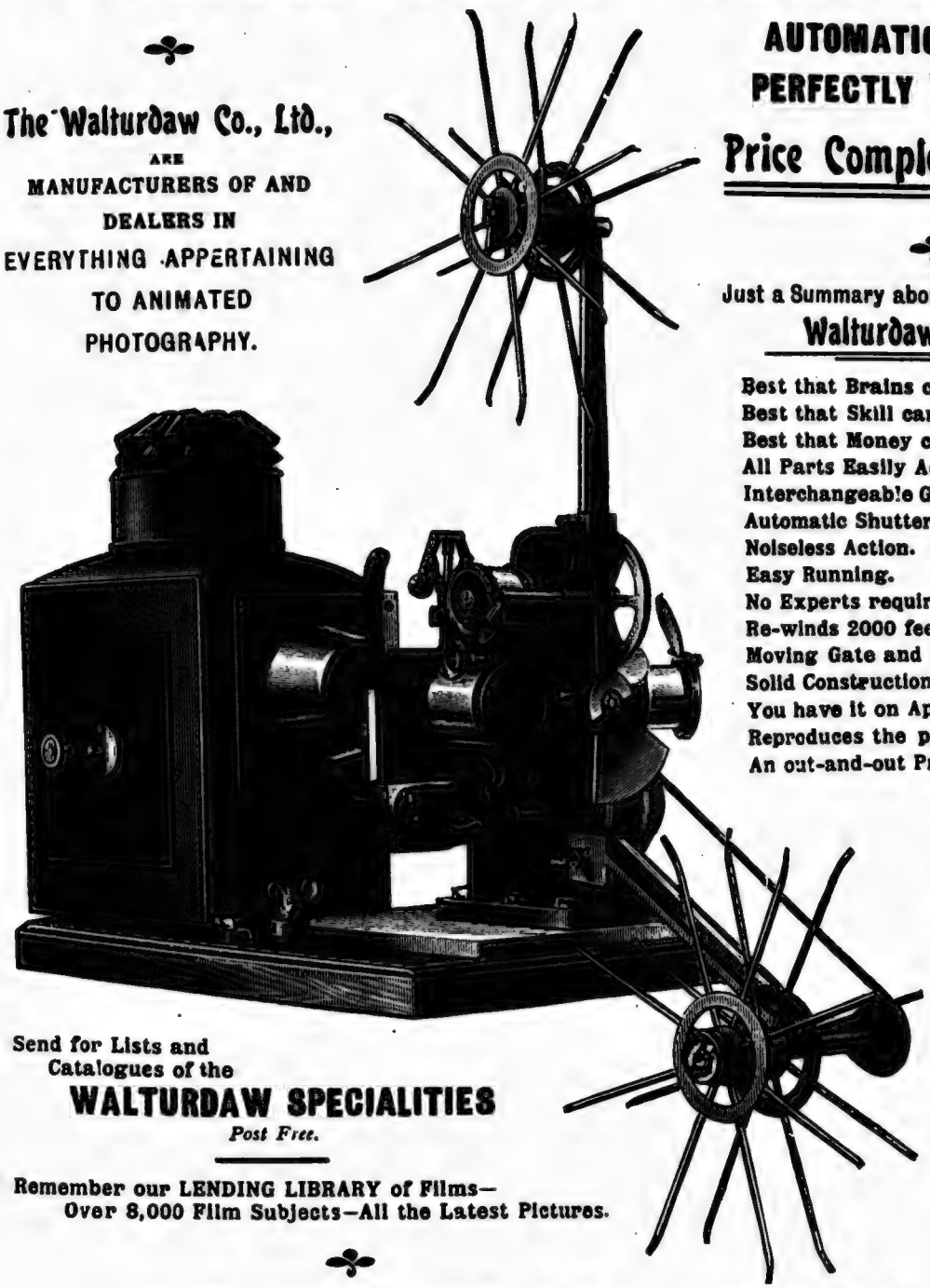
— MAKERS OF THE —

Walturdaw Bioscope

AUTOMATIC SHUTTER,
PERFECTLY FIREPROOF.

Price Complete, £25

The Walturdaw Co., Ltd.,
ARE
MANUFACTURERS OF AND
DEALERS IN
EVERYTHING APPERTAINING
TO ANIMATED
PHOTOGRAPHY.



Just a Summary about the
Walturdaw Bioscope.

Best that Brains can devise.
Best that Skill can construct.
Best that Money can buy.
All Parts Easily Accessible,
Interchangeable Gate.
Automatic Shutter.
Noiseless Action.
Easy Running.
No Experts required to Operate.
Re-winds 2000 feet of Films.
Moving Gate and Moving Light.
Solid Construction.
You have it on Approval.
Reproduces the picture as it should be
An out-and-out Practical Machine, and
A Marvel of
Simplicity.

That's the
'Walturdaw'

Reasonable in
Price too.

KINDLY LET US
HAVE YOUR
ORDER.

Send for Lists and
Catalogues of the
WALTURDAW SPECIALITIES
Post Free.

Remember our LENDING LIBRARY of Films—
Over 8,000 Film Subjects—All the Latest Pictures.

THE "WALTURDAW" COMPANY, Ltd.,

Telegrams, "Albertype, London."
Telephone, 4707 Holborn.

3, Dean Street, High Holborn, London, W.C.

Miscellaneous Advertisements.

Professional Announcements.

LECTURERS requiring a few good slides (rather than rubbish in quantity), should try Wilkinson, 15, Holmeside, Sunderland. Established 1859. Wet plate Collodion Transparencies from owner's negatives, and best colouring.

Situations Wanted.

CINEMATOGRAPH Operator seeks re-engagement, willing to travel home or abroad, highest references.—Horace J. Smith, 1, Sandown Terrace, Dews Road, Salisbury

Addresses Wanted.

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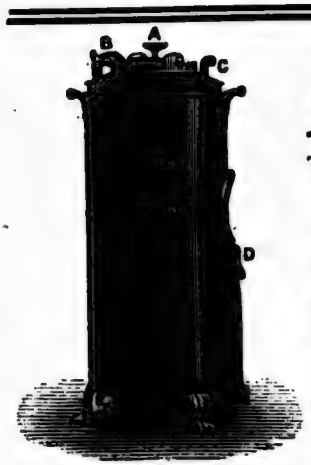

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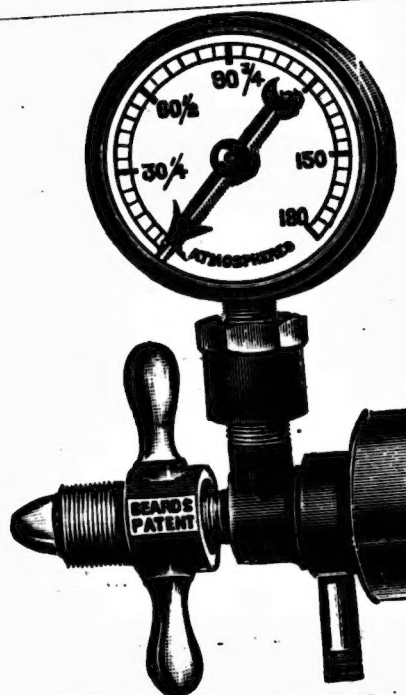

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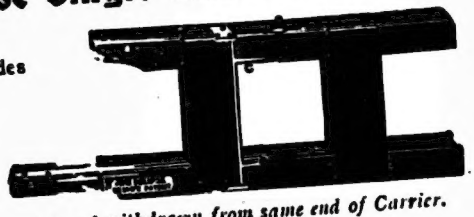

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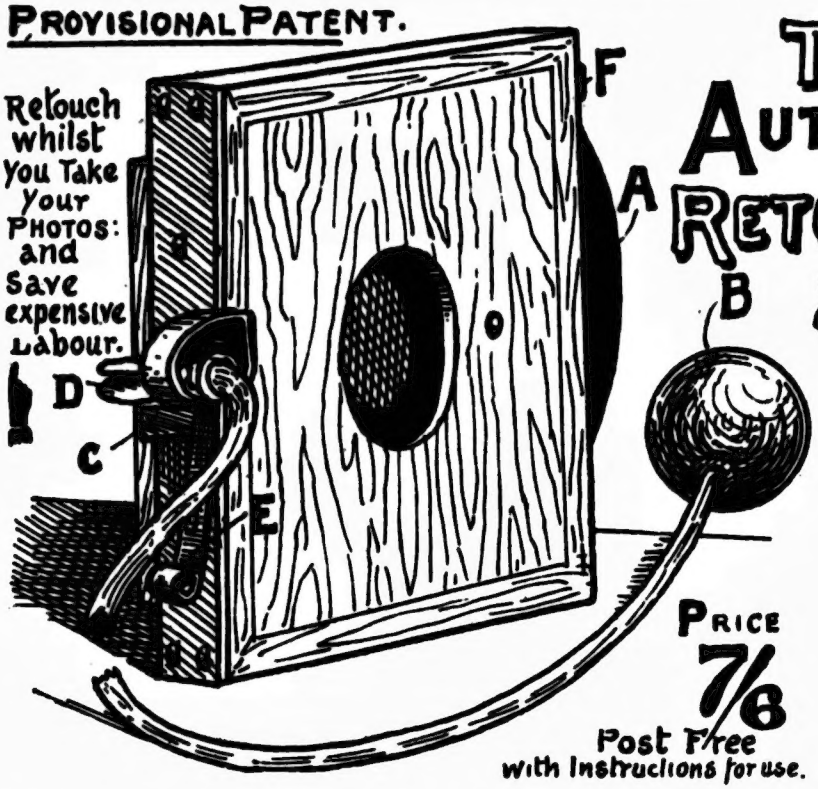

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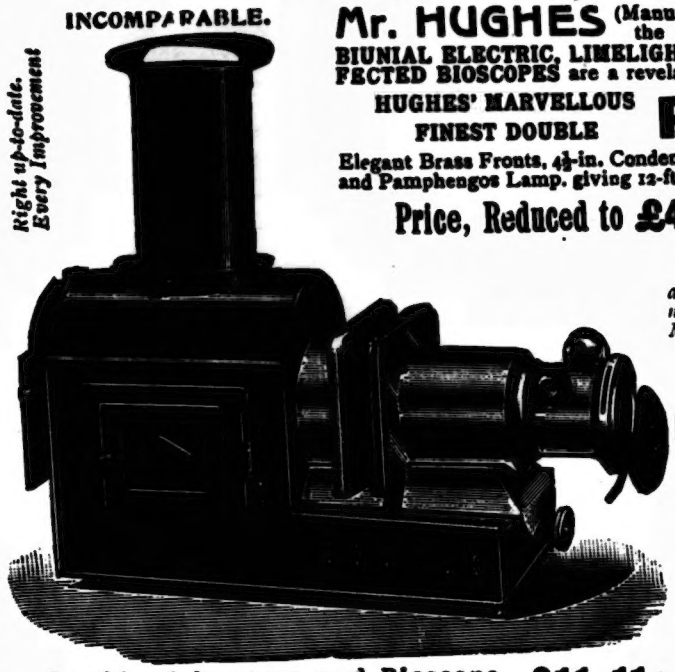

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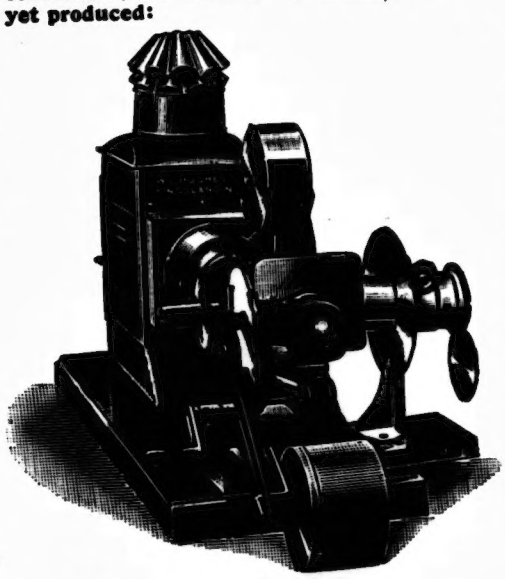

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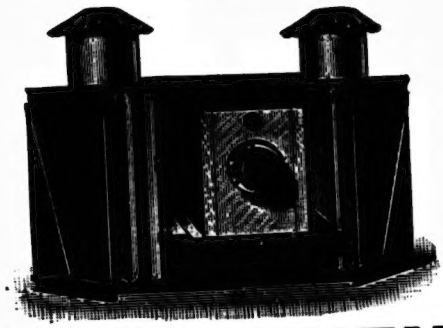

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